

L 21189-66 EWT(m)/EWP(j)/EWP(t) IJP(c) JD/WW/JG/RM

ACC NR: AP6008051

SOURCE CODE: UR/0020/66/166/004/0891/0893

AUTHOR: Boldyrev, V. V.; Oblivantsev, A. N.; Raytsimling, A. M.; Uskov, Ye. M. ^{1/2}

ORG: Institute of Chemical Kinetics and Combustion, Siberian Branch, Academy of Sciences SSSR (Institut khimicheskoy kinetiki i goreniya Sibirskogo otdeleniya Akademii nauk SSSR); Scientific Research Institute of Nuclear Physics, Tomsk Polytechnic Institute (Nauchno-issledovatel'skiy institut yadernoy fiziki pri Tomskom politekhnicheskom institut)

TITLE: The mechanism governing the effect of preliminary irradiation on the thermal decomposition of alkali metal permanganates

SOURCE: AN SSSR. Doklady, v. 166, no. 4, 1966, 891-893

TOPIC TAGS: thermal decomposition, radiolysis, manganese compound, permanganate

ABSTRACT: It is an accepted hypothesis that the acceleration in the thermal decomposition of irradiated permanganates is caused by radiochemical processes which form radiolysis products. The present study was carried out in order to find out which of these products can act as catalysts and how the mechanism of this process

UDC: 537.57 + 541.17

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can be interpreted. It is shown that factors which increase the concentration of free electrons or MnO_4^- ions in the permanganate lattice cause a decrease in the rate of thermal decomposition (e. g., the introduction of manganate ion into potassium and cesium permanganate crystals by cocrystallization from aqueous solutions). The solid radiolysis product catalyzing the thermal decomposition of irradiated permanganates is thought to be MnO_2 and the acceleration effect results from the combination of the following factors acting in two opposite directions: the accelerating effect of MnO_2 and inhibiting effect of MnO_4^- , both of which are formed during the radiolysis of permanganates. The paper was presented by Academician V. V. Voyevodskiy on 7 June 1965. Orig. art. has: 1 figure.

SUB CODE: 07/

SUBM DATE: 11May65/

ORIG REF: 010/

OTH REF: 011

Card 2/2 ddo

USYCH, F.T.

11

11

11

ARIYEVICH, A.M.; LENSKIY, Yu.V.; USKOVA, G.V.

New lamp for the luminescent diagnosis of skin diseases. Vest. dermat. i ven. 38 no.4:54-55 Ap '64. (MIRA 18:4)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut moditsinskikh instrumentov i oborudovaniya (dir. I.P.Smirnov) i Tsentral'nyy kozhno-venereologicheskiy institut (dir. - kand.med.nauk N.M. Turanov), Moskva.

L 36516-65

ACCESSION NR: AP5010490

UR/0243/64/000/009/0049/0052

AUTHOR: Uskova, G. V.

TITLE: Soviet-produced bactericidal irradiators

SOURCE: Meditsinskaya promyshlennost' SSSR, no. 9, 1964, 49-52

TOPIC TAGS: medical supply, hospital equipment, chemical laboratory apparatus, bacteria

ABSTRACT: In the SSSR, three kinds of bactericidal irradiators are produced: the stationary NBO (nastennyy bakteritsidnyy obluchatel'; wall bactericidal irradiator), the PBO (potolochnyy bakteritsidnyy obluchatel'; ceiling bactericidal irradiator), and the MBO (peredvizhnoy bakteritsidnyy obluchatel' mayachnyy tip; portable bactericidal irradiator of the beacon type). The wall-type irradiator is mounted on a stand 2-2.5 meters from the floor and employs two BUV-30 P bactericidal lamps and a discharge-regulating device consisting of two ballast coils and two starters. This irradiator is designed to disinfect air in rooms up to 30 cubic meters in volume. The beacon type irradiator produces at a distance of 5 meters in the radiation plane a radiation intensity of 8.2 millicoulombs/cm². Since

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ACCESSION NR: AP5010490

the irradiation dose fatal for various kinds of microorganisms, except for spore and fungal forms, is 5 millicoulombs . sec/cm², an exposure of less than one second is needed to kill microorganisms. Orig. art. has 4 figures.

ASSOCIATION: Vsesoyuznyy nauchno-issledovatel'skiy institut meditsinskikh instrumentov i oborudovaniya, Moscow (All-Union Scientific Research Institute of Medical Instruments and Equipment)

SUBMITTED: 28 May 64

ENCL: 00

SUB CODE: LS

NO REF SOV: 000

OTHER: 000

JPRS

Card 2/2

KALNINA, N.A., kand.tekhn.nauk; USKOVA, K.I., inzh.

Use of silicon organic compounds for decreasing moisture
absorption by cellular concretes. Trudy Zap.-Sib.fil.ASiA
no.3:139-146 '60. (MIRA 15:2)

(Air-entrained concrete)
(Waterproofing)

PROCESSING AND PROPERTY INDEX																									
GROUPS													ITEMS												
1ST AND 2ND													3RD AND 4TH												
<p>Vapor pressures of solutions of acids and salts in liquid ammonia at 15°. A. I. Shatenshtein and L. S. Uskova. <i>Acta Physicochim. U. R. S. S. 2, 337-44(1935)</i> (in German).—The osmotic coeffs. of salts in liquid NH_3 soln. increase in the order NH_4OAc, NH_4Cl, NaCl, NH_4Br, NaNO_3, NH_4NO_3, NH_4I. The values of d_1^0 for liquid NH_3 is 0.6182. For solns. of salts contg. the stated amts. of salt per 100 g. of NH_3, values of d_1^0 were: NH_4Cl, 0.66 g., 0.641, 20.80 g., 0.719; NH_4Br 3.80 g., 0.641, 34.86 g., 0.817; NH_4NO_3 6.76 g., 0.654, 27.46 g., 0.744; NaNO_3 4.16 g., 0.643, 31.00 g., 0.781; NaCl 1.99 g., 0.632, 6.60 g., 0.682; NaCl 1.98 g., 0.638, 8.31 g., 0.680. The vapor pressure of NH_3 at 15° is 6462.6 mm. The vapor-tension lowerings in mm. due to γ moles of salt dissolved in 1000 g. of NH_3 at 15° were: NH_4Cl 21 at 0.304 mm., 57 at 0.761, 127 at 2.721; NH_4Br 17 at 0.198, 88 at 0.708, 240 at 2.956, 381 at 4.317; NH_4NO_3 20 at 0.253, 61 at 0.745, 206 at 2.233; NaNO_3 22 at 0.229, 84 at 0.981, 209 at 2.623; NaCl 32 at 0.375, 62 at 0.797, 85 at 1.008; NH_4I 46 at 0.290, 192 at 1.064; NH_4OAc 73 at 1.010; NaCl at 10°, 97 at 1.365. The low osmotic coeffs. are due to the low dielec. const. of liquid NH_3 and rise with the latter and the cond. coeff. as the temp. is lowered.</p> <p>V. H. Rathmann</p>																									
<p>ASB-SLA METALLURGICAL LITERATURE CLASSIFICATION</p>																									

KHAKHINA, L.P.; USKOVA, L.S.; KAGAN, L.M.

Objective method for evaluating the coloring of potato chips.
Kons. i ov.prom. 18 no.9:37-38 S '63. (MIRA 16:9)

1. Tsentral'nyy nauchno-issledovatel'skiy institut konservnoy i
ovoshchesushil'noy promyshlennosti.
(Potato chips—Testing)

USKOV 12/4/55
BRUNZ, V.O.; KARSKAYA, T.N.; kand.khim.nauk; KOSHELEVA, G.N., kand.khim.
nauk; ~~MALKIN, G.B.~~; POSLAVSKAYA, K.D.; UEDINOVA, U.A.; USKOVA,
L.Ye.; FLORENSKAYA, T.N.; RESHETINA, S.V., red.; MATVEYEVA, A.Ye.,
tekhn.red.

[Organic reagents and chemicals for laboratory practice; technical
specifications] Reaktivy i preparaty dlia laboratornykh rabot
otganicheskii; tekhnicheskii usloviia. [Moskva] Standartgiz.
Pt.1. 1957. 136 p. (MIRA 11:6)

1. Russia (1923- U.S.S.R.) Ministerstvo khimicheskoy promyshlen-
nosti. 2. Vsesoyuznyy nauchno-issledovatel'skiy institut khimiche-
skikh reaktivov Ministerstva khimicheskoy promyshlennosti (for all
except Reshetina, Matveyeva)
(Chemical tests and reagents--Standards)

BRUDZ', V.G.; USKOVA, L.Ye.; NOVKOVSKAYA, N.A.; POSLAVSKAYA, K.D.; RAKOVSKAYA, V.A.; PETROVA, G.D.; BROVKIN, L.V., red.; SHPAK, Ye.G., tekhn. red.

[Manual of technical specifications for reagents and preparations used in laboratory work; organic reagents and preparations] Sbornik tekhnicheskikh uslovii na reaktivy i preparaty dlia laboratornykh rabot; organicheskie reaktivy i preparaty. Moskva, Gos.nauchno-tekhn.izd-vo khim.lit-ry. 1961. 582 p. (MIRA 14:12)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut khimreaktivov i osobo chistykh veshchestv Gosudarstvennogo komiteta Soveta Ministrov SSSR po khimii (for all except Brovkin, Shpak).
(Chemical tests and reagents)

USKOV, V.S.; USKOVA, N.D.

Model calorimetric instrument for reproducing the quantity unit
of heat. Trudy VNIIM no.34:5-16 '58. (MIRA 13:5)
(Calorimeters)

3 380
S/580/61/000/000/005/016
A057/4126

5.3401

AUTHORS: Chirko, A.I.; Uskova, N.F.

TITLE: Products and kinetics of autoxidation of cycloheptene and the effect of the ring size on the autoxidation rate

SOURCE: Yerofeyev, B.V. and Tishchenko, I.G., eds. Zhidkofaznoye okisleniye nepredel'nykh organicheskikh soyedineniy, Minsk, 1961, 51 - 62

TEXT: The primary product of autoxidation of cyclopentene was separated for the first time, its physico-chemical characteristics were determined and also the secondary products of autoxidation investigated. Further were investigated the kinetics of the autoxidation of cyclohexene with and without 9 different admixtures, and they were compared with cycloheptene and cyclopentene to study the effect of the ring size on the rate of autoxidation. The method of investigation was described in an earlier paper. Among the substances tested as initiators, cobalt and manganese butyrates showed the highest activity and stearates increased 3 - 10 times the percentage of oxidation in relation to runs without admixtures. Increased activity of the initiators with the same cation can be effected by increasing the number of carbon atoms in the anion of the initiator. The primary

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Products and kinetics of autoxidation of

S/580/61/000/000/005/016
A057/A126

autoxidation product was obtained by autoxidation of cyclopentene at 50°C during 2 h in the presence of 1% manganese stearate. An analysis of the fraction boiling at 51°C/0.1 torr indicated a rather pure hydroperoxide of 1-hydroperoxy-cycloheptene-2. Partial isomerization of the product is possible with the formation of minute quantities of methylcyclohexene-hydroperoxide. Dialkylperoxide and dialkyl were determined in the remainder, i.e., as secondary product of autoxidation. The formation of these substances is explained by the rupture of the chain reaction during the autoxidation of cyclopentene. The activation energy of cyclohexene autoxidation in the presence of manganese butyrate was calculated with 16,874 cal/mole. Experiments on the effect of the concentration of the initiator on the rate of autoxidation were carried out at 50°C in the presence of 0.25, 0.5, and 2% cobalt stearate. The dependence of the maximum rate of oxidation on the

concentration of cobalt stearate can be expressed by the equation $v_m = \frac{a[u]}{1 + b[u]}$ (v_m - rate, a and b - constants, $[u]$ - concentration of the initiator). Experiments on the effect of the size of the cyclene ring showed the following sequence in relation to the autoxidation rate: cyclohexene > cycloheptene > cyclopentene. The effect of the cyclene concentration on the rate of autoxidation, studied in the presence of 1% cobalt stearate, showed that the dependence of the maximum rate can be expressed by $V_m = K C^n$. There are 4 figures and 6 tables.

Card 2/2

AKHREM, A.A.; UKHOVA, L.I.; USKOVA, N.F.

Heterocyclic analogs of corticosteroids. Report No.1:
Syntheses based on 1,2-dimethyl-4-oxo-decahydroquinoline.
Izv. AN SSSR Otd.khim.nauk no.2:304-309 F '62.

(MIRA 15:2)

1. Institut fiziko-organicheskoy khimii AN Belorusskoy SSR
i Institut organicheskoy khimii im. N.D.Zelinskogo AN SSSR.
(Quinoline)
(Corticosteroids)

UKHOVA, L.I.; AKHREM, A.A.; USKOVA, N.F.

Stereochemistry of the synthesis of
1,2-dimethyl-4-ethynyl-4-hydroxydecahydroquinolines. Izv.AN
SSSR Otd.khim.nauk no.5:951-953 My '63. (MIRA 16:8)

1. Institut fiziko-organicheskoy khimii AN BSSR i Institut
organicheskoy khimii im. N.D.Zelinskogo AN SSSR.
(Quinoline) (Stereochemistry)

SOV/58-59-8-17620

Translated from: Referativnyy Zhurnal Fizika, 1959, Nr 8, p 93 (USSR)

AUTHORS: Uskov, V.S., Uskova, N.S.

TITLE: Investigation of a Model Calorimetric Device for Reproducing the Unit of Heat Quantity

PERIODICAL: Tr. Vses. n.-i. in-ta metrol, 1958, Nr 34 (94), pp 5-16

ABSTRACT: A calorimeter is described, which is based on the principle of determining the heat value of a calorimetric system by means of an electrical method. Heat is fed into the calorimeter by means of a heater through whose coils a direct electric current passes. The intensity of the current and the voltage are measured by means of the compensation method. The time of passage of the current is measured by means of a chronograph. The heat value of the system is computed from the increase in temperature of the water.

Card 1/1

USKOVA, H.S.; USKOV, V.S.

Development of a method for preparing pure copper for metrological purposes. Trudy VNIIM no.34:67-72 '58.

(MIRA 13:5)

(Copper)

USKOVA, N. S.

Distr: 4E2c

✓ Development of a method of preparation of pure silver for meteorological purposes. N. S. Uskova. *Trudy Vysokaya Nauch.-Issledovatel. Inst. Metrol. im. D.I. Mendeleeva*, 1958, No. 34, 73-87. Redn. of multiply recrystd. AgNO₃ with HCOONH₄ and electrolysis of a AgNO₃ soln. with a sol. anode were investigated. AgNO₃ prepd. from HNO₃ contg. nonvolatile residue 0.0018, heavy metals 0.0008, Fe 0.00008, As 0.000003, SO₄ 0.0005, and Cl⁻ 0.0002%. purified by 5 redistns. and from 99.992% pure Ag was used in the expts. Electrolysis of electrolytes contg. 2, 4, and 6% AgNO₃ and 5% free HNO₃ was conducted at 0.01-0.03 amp./sq. cm., 1 amp./l., and a distance of 8 cm. between electrodes. The Ag powder obtained in the expts. was cooled in a stream of H₂. Melting expts. were performed in an atm. of H₂ having a humidity of 0.2 mm. Hg. HCOONH₄, as reducing agent gave a metal of higher quality (contg. less Fe, Cu, and Si) than HCOONa. The electrolytic Ag was still of higher quality, i.e. 99.9999% pure contg. Cu 0.00001, Ca 0.00004, Mg 0.00001, and H 0.00004%. Impurity of electrolytic Ag increased at higher electrolyte concns. in the range studied. Cu content of Ag increased while electrolyzing a 2% AgNO₃ electrolyte with c.d. increase. In a 4-6% electrolyte, Fe and Sn contents in the product also increased at increased c.d. Optimal conditions of electrolysis are: an electrolyte contg. 2% AgNO₃ and 0.5% free HNO₃, c.d. 0.01 amp./sq. cm. at a voltage of 1.3 v. The presence of a dense diaphragm had no effect on the purity of electrolytic Ag.

Mordchal Medvedev

USKOVA, N. V.

"The Effect of Certain Derivatives of Guanidine and Aminopyridine on the Reactivity of Skeletal Muscles to Calcium Ions," a report presented at the 570th meeting of the Pharmacology and Toxicology Section, Leningrad Society of Physiologists, Biochemists, and Pharmacologists im. I. M. Sechenov, 9 June 1954, Farm. i Toks., Ju-Aug. 1955, pp. 60-63.

Chair of Pharmacology, Leningrad State Pediatric Medical Institute

Sum. 900, 26 Apr 56

USKOVA, N.V.

Influence of poisons, impairing coupled phosphorylation, on the transmission of an impulse from a nerve to a muscle. Trudy Vses. ob-va fiziol., biokhim. i farm. 4:190-191 '58.

(MIRA 14:2)

1. Laboratoriya obshchey farmakologii Instituta eksperimental'noy meditsiny AMN SSSR (zav. laboratoriyey prof. V.M. Karasik).
(POISONS—PHYSIOLOGICAL EFFECT)
(MUSCLES)

USKOVA, N.V.

Hyperkinesis of central origin caused by tetridine and its inhibition with choline-sensitizing substances. Biul. eksp. biol. i med. 52 no.7:73-75 JI '61. (MIRA 15:3)

1. Iz kafedry farmakologii (zav. - deystvitel'nyy chlen AMN SSSR V.M. Karasik) Leningradskogo pediatricheskogo meditsinskogo instituta. Predstavelena deystvitel'nyy chlenom AMN SSSR V.M. Karasikom.

(TETRIDINE--PHYSIOLOGICAL EFFECT)
(PARASYMPATHOLYTICS) (MOVEMENT DISORDERS)

USKOVA, O. N.

Testing of steel rails. O. Uskova. *Sovetskikh Transport* 1969, No. 3, 50-71. Bessemer and open-hearth rails (softized and nonsoftized) were tested against wear and deformation on different railroad sections subject to varying traffic conditions. The results indicate that lab. tests of rails (chem. and mech. properties) agree very often with the field tests but the latter fill in the gaps left by the lab. tests. It is stated that the serviceability of rails should be evaluated on the basis of lab. and field tests. B. Z. Kamich

ASB-SLA METALLURGICAL LITERATURE CLASSIFICATION

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
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USKOVA, O.N.

- *42. **Quality and Service of Open Hearth Steel Rails from the Korkh Works.** (In Russian.) L. L. Pinchusovitch and O. N. Uskova. *Bulletin of the Academy of Sciences of U.S.S.R., Section of Technical Sciences*, no. 10, 1946, p. 1421-1429.

Describes an experimental investigation of the properties of steel rails produced from an arsenic-containing ore in the open-hearth. The wear properties of the rails were higher than those produced from other ores, and the arsenic content (0.09 to 0.15%) did not affect the strength of the steel.

USKOVA, O.N., kandidat tekhnicheskikh nauk.

Operational tests of RT50 rails on the Transcaucasus Railroad.
Trudy TSNII MPS no.111:124-135 '55. (MLRA 9:5)
(Railroads--Rails)

USKOV, I.O.; USEKOV, U.T.

Colloidal and chemical properties of alumina suspensions. Hank. zap.
Kyiv.un. 16 no.15:42-53 '57. (MIRA 11:11)
(Alumina) (Colloids)

USKOVA, O. N., kandidat tekhnicheskikh nauk.

The problem of raising the quality of rails. Zhel.dor.transp.

39 no.2:40-44 P '57.

(MLRA 10:3)

(Railroads--Rails)

USKOVA, O.N., kand.tekhn.nauk

Contact damage to rails on curves and the fight against it. Vest.
TSNII MPS 18 no.1:38-40 F '59. (MIRA 12:3)
(Railroads--Rails) (Railroads--Curves and turnouts)

BAULIN, I.S., inzh.; D'YAKONOV, V.N., kand, tekhn.nauk.; USKOVA, O.N., kand.
tekhn.nauk.; SHUR, Ye.A., inzh.; KONYIKHOV, A.D., inzh.; APANAS'YEV,
L.U., inzh.; EVLIKANOV, A.V., inzh.

Investigating the mechanism of rail contact-fatigue damages
(defects 82 and 64). Vest.TSNII MPS 21 no.4:27-30 '62. (MIRA 15:6)
(Railroads--Rails--Defects)

DOKUCHALOVA, V.V.; USKOVA, S.G.; KHANDEL'SMAN, Yu.M.

Cylindrical stone mounting with a low moment of starting.
Priborostroenie no.2:15-18 F '63. (MIRA 16'5)
(Instruments)

USKOVA, V.Ya.

Swedish fly and the leaf beetle *Chaetocnema aridula* on grain.
Zashch. rast. ot vred. : bol. 9 no.7:39 '64. (MIRA 18:2)

1. Shumikhinskiy punkt sluzhby usheta i prognozov, Kurganskaya
oblast'.

USKOVA, Ye. T.

Dissertation: "Electrokinetic and Hydrophylic Properties of Clay." Cand Chem Sci,
Kiev State Univ., Kiev, 1953. (Referativnyy Zhurnal--Khimiya, Moscow, No 4, Feb 54)

SO: SUM 243, 19 Oct 54

USKOVA, Ye.T.

USKOVA, Ye.T.

Hydrophilic properties of clays of the kaolinite group [with summary in English]. Koll. zhur. 19 no.6:747-751 N-D '57. (MIRA 11:1)

1. Ukrainskaya akademiya sel'skokhozyaystvennykh nauk, Kiyev.
(Kaolinite)

USKOVA, Ye. T.

AUTHOR: Uskova, Ye.T.

69-20-1-14/20

TITLE: The Hydrophilic Properties of Montmorillonitic Clays (O gidrofil'nosti montmorillonitovoy gliny)

PERIODICAL: Kolloidnyy Zhurnal, 1958, Vol XX, # 1, pp 102-105 (USSR)

ABSTRACT: The hydrophility of montmorillonite clays has been studied only in regard to the content of one ion. The hydrophility in the presence of two and more cations is unknown. In the article, the change of hydrophility of bentonites in various correlations of one- and two-valency cations is investigated. The hydrophility is determined as the quantity of water bound by the surface of 1 gram of the measured specimen. The quantity of water is investigated by a Dumanskiy indicator. Sucrose was used as an indicator. Fig. 1 shows that at a content of 20-40% of the adsorption capacity for cations, the hydrophility increases sharply and reaches a maximum. The ζ -potential of these preparations was measured by electrophoretic and electroosmotic methods. The hydrophilic and ζ -potential curves run parallel (Fig. 1 and 2). It may be concluded that the predominant factor in the binding of water is the ζ -potential.

Card 1/2

The Hydrophilic Properties of Montmorillonitic Clays

69-20-1-14/20

There are 2 figures, 1 table, and 7 Soviet references.

ASSOCIATION:

Ukrainskaya sel'skokhozyaystvennaya akademiya, Kiyev
(Ukrainian Agricultural Academy, Kiyev)

SUBMITTED:

September 25, 1956

AVAILABLE:

Library of Congress

Card 2/2

AUTHORS: Uskov, I.A., Uskova, Ye.T.

SOV-69-58-4-14/18

TITLE: Electrochemical Study of Bentonite Suspensions (Elektrokhimicheskoye izucheniye bentonitovykh suspenziy) 2. The Action of Sodium Hydroxide with Time on Suspensions of Electrodialyzed Ascangel (2. Deystviye gidrookisi natriya na suspenziyu elektrodializovannogo askangelya vo vremeni)

PERIODICAL: Kolloidnyy zhurnal, 1958, Vol XX, Nr 4, pp 487-492 (USSR)

ABSTRACT: In the oil industry, great quantities of clay treated with acids are used. In the food industry, they are used for the purification of oil. The origin of natural acid bentonites has been studied recently by several investigators. In the article, the neutralization of electrodialyzed bentonite by strong alkali is considered. The potentiometric and conductimetric titration curves at various time intervals were obtained. The first series of measurements was made 5 min after addition of the alkali, the second after 24 hours, and others after 8 and 14 days. The conductimetric and potentiometric results are given in Figures 1 and 2. The potentiometric curve after addition of the alkali is similar to the titration curve of a weak monobasic acid with strong alkali. It is characterized by an inflexion at pH 8.3 corresponding to absorbed alkali in the quantity $675 \mu\text{eq/g}$. After two days in the field of high pH-

Card 1/3

SOV-60-58-4-14 '18

Electrochemical Study of Bentonite Suspensions. 2. The Action of Sodium Hydroxide with Time on Suspensions of Electrodialyzed Ascangel

values, a second inflexion is observed. In Figure 2, the point of neutralization corresponds to $855 \mu\text{eq/g}$. All curves of potentiometric titration are characterized by a strong increase of pH on addition of small quantities of alkali. In the middle parts of the curves a slow increase is observed. The point of equivalence is clearly marked at pH 8.2-8.4. Figure 3 shows that there is no noticeable influence of the CO_2 in the air on the pH value of the suspension. The Al-ions in the disperse medium at equilibrium are considerably hydrolyzed and ensure the acidity of the suspension. The second inflexion in the potentiometric curve is connected with the solution of aluminum hydroxide which is transformed into aluminate. This inflexion appears after one day and becomes marked after a week. The experiments have shown that the neutralization of electrodialyzed bentonite by alkali takes place slowly. Figure 4 shows the change of the absorbed quantity of sodium hydroxide with time corresponding to the point of equivalence on the first inflexion of the potentiometric titration curve. The conductimetric titration confirms the presence of ion-exchange aluminum in electro-

Card 2/3

SOV-69-59-4-14/18

Electrochemical Study of Bentonite Suspensions. 2. The Action of Sodium Hydroxide with Time on Suspensions of Electrodialyzed Ascangel

dialyzed bentonite.

There are 4 diagrams and 15 references, 5 of which are Soviet, 6 English, 3 American, and 1 German.

ASSOCIATIONS: Kiyevskiy gosudarstvennyy universitet im. T.G. Shevchenko
(Kiev State University imeni T.G. Shevchenko)
Ukrainskaya akademiya sel'skokhozyaystvennykh nauk
(Ukrainian Academy of Agricultural Sciences)

SUBMITTED: April 7, 1957

1. Clays--Chemical reactions

Card 3/3

56

SOV/69-21-2-18/22

AUTHORS: Uskov, I.A. and Jskova, Ye.T.

TITLE: The Electrochemical Study of Bentonite Suspensions (Elektrokhimicheskoye izucheniye bentonitovykh suspenziy).
3. Potentiometric and Conductometric Titration of an Electrically Dialyzed Ascangel With Hydroxides of Alkali Metals (3. Potentsiometricheskoye i konduktometricheskoye titrovaniya suspenzii elektrodializovannogo askangelya gidrookisnyami shchelochnykh metallov)

PERIODICAL: Kolloidnyy zhurnal, 1959, Nr 2, pp 231-237 (USSR)

ABSTRACT: The experiments were suggested by the circumstance that the problems of fixation and localization of cations in the lattice of silicates of aluminium are still objects of discussion. There is no generally accepted opinion, for instance, concerning the cation absorbing qualities of clays. Problems of this kind however, connected with the clayish minerals of the montmorillonite group, which have a great absorbency and a number of special qualities resulting from their extensible lattice, are of special

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The Electrochemical Study of Bentonite Suspensions. 3. Potentiometric and Conductometric Titration of an Electrically Dialyzed Ascangel With Hydroxides of Alkali Metals.

interest and give hope of new results. The authors carried out the titration of a suspension of an electrically-dialyzed ascangel with hydroxides of lithium, sodium, potassium, rubidium and cesium and came to the following conclusions: 1) the potentiometric curves obtained at once at the adding of sodium, potassium, rubidium and cesium hydroxides are characterized by one inflexion at pH 8-9.5. In the case of lithium hydroxide, the curve has a second inflexion at pH 12.4. After 24 hours this inflexion shows itself on all curves; 2) in the course of time the point of the first inflexion is displaced to the side of the large quantities of absorbed bases in dependence on the nature of the cation; 3) the relative change in the electric conductivity of the suspension at the addition of hydroxides has been calculated according to the inclination of the initial section of the conductometric titration curves. In the course of time this inclination

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The Electrochemical Study of Bentonite Suspensions. 3. Potentiometric and Conductometric Titration of an Electrically Dialyzed Ascangel With Hydrooxides of Alkali Metals.

decreases for lithium, cesium and rubidium bentonites. Its various values determine the dissociation degree of the differently substituted bentonites; Li-bentonite dissociates most, Na-bentonite a little more weakly and K- Rb- and Cs-bentonites dissociate to a considerably lesser degree; 5) the measures of the ions in a non-hydrated state and their polarizability are of importance during the process of penetration to the exchange sites of the montmorillonite lattice; 6) an equal absorbency of bentonite for all cations to be determined potentiometrically may exist, provided equilibrium is attained in the system. There are 3 graphs and 11 references, 6 of which are German and 5 Soviet.

ASSOCIATION:

Kiyevskiy universitet im. T.G. Shevchenko (The Kiyev University imeni T.G. Shevchenko) Ukrainskaya akademiya sel'skokhozyaystvennykh nauk (The Ukrainian Academy of Agricultural Sciences)

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The Electrochemical Study of Bentonite Suspensions. 3. Potentiometric and Conductometric Titration of an Electrically Dialyzed Ascangel With Hydroxides of Alkali Metals.

SUBMITTED: April 27, 1957

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5(4)

SOV/69-21-4-19/22

AUTHOR:

Uskov, I.A. and Uskova, Ye.T.

TITLE:

Electrochemical Studies of Bentonite Suspensions
4. Potentiometric Titration of Various Acid Forms of
Ascangel

PERIODICAL:

Kolloidnyy zhurnal, 1959, Vol XXI, Nr 4, pp 492-498
(USSR)

ABSTRACT:

The authors have carried out the potentiometric titration of acid forms of ascangel, which were obtained by 1) treatment of the bentonite with concentrated mineral acid followed by a quick washing off of excess acid, and 2) passing the mineral through an H-resin filled column. The article is divided into three sections: 1) the effect of the concentration of the suspension on the character of the titration curves of electro-dialyzed ascangel; 2) an investigation of H-ascangel; 3) an investigation of columnated ascangel suspensions. Graph 1 (section 1) shows the results of the titration of suspension. In dependence on the increase of the concentration of the sus-

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Electrochemical Studies of Bentonite Suspensions. 4. Potentiometric Titration of Various Acid Forms of Ascangel

pension, a lowering of the initial and a rise of the last section of the potentiometric titration curves can be observed. All curves are characterized by one point of inflexion in the weak-alkaline pH region. The position of this point depends on the concentration of the suspension. With increasing concentration it shifts to the region of smaller amounts of bound sodium hydroxide. This shift cannot be explained as an electrochemical phenomenon. Here the colloid-chemical properties of the suspensions play a decisive role. The phenomenon is due to the interaction of the alkali with the active ions on the surface of the particles as well as with colloid aluminum hydroxide. As a result, the amount of absorbed base increases in dependence on a diminution of the concentration of the suspension. For 0.5-3% concentrations, this magnitude practically remains constant. The authors conclude that a comparison between potentiometric curves can be carried out within the limits of certain concentrations, particularly from 0,5 to 3%. The results of the investigation as described in sections 2 and 3 can be summarized as

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Electrochemical Studies of Bentonite Suspensions.4. Potentiometric Titration of Various Acid Forms of Ascangel

follows. In contrast to electrodialed bentonite, which appears as Al-H-bentonite, the cation exchange capacity of H-bentonite at the titration with various alkalis has one and the same value. The real maximum cation exchange capacity of bentonite can be determined by potentiometric titration of a diluted (0,5-1%) H-bentonite suspension with a strong base. The columnation of natural ascangel through H-resin results in the formation of an acid form of bentonite, in which the acidity is caused partly by H and partly by Al exchange ions. The insufficient replacement of exchange cations by hydrogen finds its explanation in the small exchange capacity of the cationite and its comparatively low activity. The potentiometric titration of electrodialed ascangel columnated through H-resin bears witness to the presence of a considerable amount of adsorbed H-ions in the suspension. Columnation of electrodialed ascangel through Al-resin results in the formation of Al-bentonite, which

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Electrochemical Studies of Bentonite Suspensions. 4. Potentiometric Titration of Various Acid Forms of Ascangel

coagulates on the surface of cationite grains and chokes the column. A comparison of the results of columnation of the suspension of electrodialyzed bentonite through H- and Al-resins confirms that its acidity is caused by the simultaneous presence of adsorbed H- and Al- ions. With increase in the concentration of suspensions of electrodialyzed ascangel, the jump of the potential on potentiometric curves in the region of saturation becomes more distinct. At the same time the amount (referred to 1 g bentonite) of base neutralized by the bentonite, first sharply decreases, but subsequently remains practically constant within a large interval of concentrations. The determination of the cation exchange capacity by the point of inflexion on the curves of potentiometric titration will be preferably carried out on H-bentonite suspension, whose concentration lies within certain limits (0.5-2% for ascangel). The article was de-

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Electrochemical Studies of Bentonite Suspensions. 4. Potentiometric Titration of Various Acid Forms of Ascangel

livered as a report at the 4th All-Union Conference of Colloid Chemistry in Tbilisi in 1958. There are 5 graphs and 8 references, 4 of which are Soviet and 4 American.

ASSOCIATION: Kiyevskiy universitet imeni T.G. Shevchenko (Kiyev University imeni T.G. Shevchenko) Ukrainskaya akademiya sel'skokhozyaystvennykh nauk (Ukrainian Academy of Agricultural Sciences)

SUBMITTED: 4 March, 1958

Card 5/5

USKOV, I.A.; USKOVA, Ye.T.

Electrochemical study of bentonite suspensions. Part 6:
Potentiometric titration of aminobentonite complexes
[with summary in English]. Koll.zhur 23 no.4:469-474 J1-Ag
'61. (MIRA 14:8)

1. Kiyevskiy universitet im. T.G. Shevchenko i Kiyevskiy
tekhnologicheskoy institut pishchevoy promyshlennosti.
(Bentonite) (Potentiometric analysis)

GORB, T.F.; USKOVA, Ye.T.

Some physicochemical properties of kieselguhr from the
Kirovograd deposit. Trudy KTIPP no.25:98-101 '62.

(Kirovograd Province—Diatomaceous earth) (MIRA 16:5)

GORB, T. F.; POLYACHENKO, M. M.; USKOVA, Ye. T.; ARTEMENKO, M. V.

Changes in ~~some~~ physicochemical properties of syrup occurring during filtration through kieselguhr. Izv.vys.ucheb.zav.; pishch.tekh. no. 2:60-61 '64. (MIRA 17:5)

1. Kiyevskiy tekhnologicheskii institut pishchevoy promyshlennosti, kafedra obshchey i neorganicheskoy khimii.

USKOVSKIY, Vsevolod Andreyevich

[Theory of probabilities] Teoriia veroiatnostei. Moskva, Voenno-
morskoe izd-vo, 1953. 319 p. (MLRA 7:6)
(Probabilities)

1ST AND 2ND ORDER										3RD AND 4TH ORDER									
PROCESSES AND PROPERTIES INDEX																			
<p>SA</p> <p>4623. Vapour Pressures of Solutions of Acids and Salts in Liquid Ammonia. A. I. Schottenstein and L. S. Uehow. <i>Acta Physicochemica</i>, 2, 3, pp. 337-344, 1953. In German.—Measurements are made of the lowering of the vapour pressure of solutions of NH_4I, NH_4Br, NH_4NO_3, $\text{NH}_4\text{C}_2\text{H}_3\text{O}_2$, NaCl and NaNO_3 in liquid ammonia at 15° C. and in the case of NaCl at 10° C. The densities of some of the solutions are also measured. The values of the osmotic coefficients for a range of concentrations of these electrolytes in liquid ammonia are derived, and compared with the results of other workers. R. W. P.</p>																			
<p>ASB-5LA METALLURGICAL LITERATURE CLASSIFICATION</p>																			
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US-KRASOVEC, Marija

Cytodiagnosis of pulmonary carcinoma. Tuberkuloza 17 no.1/2:4/-49
Ja-Ap'65.

1. Onkoloski institut, Ljubljana (Direktor: prof. dr. Bozena
Ravnihar).

MAM-KIN, P.S.; Ural'skiy, P.S.

Slap resistance of refractory products. Ogneupory 30 no.3:36-47
'65. (MIRA 18:5)

1. Ural'skiy politekhnicheskii Institut im. S.M.Kirova.

MAMYKIN, P.S.; USKUMBAYFV, N.U.; RAVDANIS, B.I.; YAKUSHEV, Ye.A.; PSHENBAYEV, R.G.;
SIMKIN, E.A.

Testing high-alumina refractories. TSvet.met. 38 no.3:35-36 Mr 165.
(MIRA 18:6)

CHIKULAYEV, S.; LARIN, D., inzh.; YEFIMOV, M.; CHERNYAVSKIY, E.I., inzh.;
USLISTYY, B.S., inzh. po tekhnike bezopasnosti (Donetskaya oblast',
gorod Ukrainsk)

Letters to the editors. Bezop.truda v prom. 9 no.4:54-55 Ap '65.
(MIRA 18:5)

1. Zamestitel' glavnogo inzhenera po tekhnike bezopasnosti,
priisk Leninskiy, Yakutskaya ASSR (for Chikulayev). 2. Upravlenie
Yuzhno-Kazakhstanskogo okruga Gosudarstvennogo komiteta pri Sov-
Ministrov KazSSR po nadzoru za bezopasnykh vedeniye rabot v
promyshlennosti i gornom delo (for Larin). 3. Nauchno-
tekhnicheskoy informatsii i ratsionalizatsii Perekovskogo zdaniya
imeni Kirova (for Yefimov). 4. Ural'skiy nauchno-issledovatel'skiy
i proyektnyy institut mekhanicheskoy promyshlennosti, Sverdlovsk (for
Chernyavskiy).

USLONTSEV, B., nauchoviy spivrobochnik; BEREZHNIY, M.

Mechanized production of three-step slag blocks. Sil'.bud. 9
no.6:9-10 Ja '59. (MIRA 12:9)

1. Sektor tekhnologii i organizatsii sil'skogo budivnitstva
Akademii budivnitstva i arkhitekturi URSR (for Usontsev). 2.Golova
radi Izyum'skoi mizhkolgospnoi budivel'noi organizatsii Khar'kivs' -
koi oblasti (for Berezhniy).
(Izyum District--Concrete blocks)

USLONTSEV, B., nauchnyy sotrudnik; BEREZHNYI, M.

Using assembly-line methods in constructing livestock buildings with arched roofs. Sil' bud. 9 no.8:13-16 Ag '59. (MIRA 12:12)

1.Sektor tekhnologii i organizatsii sel'skogo stroitel'stva Akademii stroitel'stva i arkhitektury USSR (for Uslontsev). 2.Predsedatel' Izyumskoy mezhholkhoznoy stroitel'noy organizatsii Khar'kovskoy oblasti (for Bereshnyy).
(Kharkov Province--Farm buildings) (Assembly-line methods)

USLONTSEV, B., nauchnyy sotrudnik; BEREZHNOY, N.

Using three-step blocks in building cow barns. Sel' stroi. 14
no.11:9-11 N '59 (MIRA 13:3)

1. Akademiya stroitel'stva i arkhitektury USSR (for Uslontsev).
2. Predsedatel' Izyumskogo mezhkolkhozstroya (for Berezhnoy).
(Izyum District--Dairy barns) (Building blocks)

USLONTSEV, B.; YUROVSKIY, V. [Yurovs'kiy, V.]; ZADORIN, M.

Using low-line methods in constructing livestock buildings
in Crimean villages. Sil'.bud. 10 no.8:6-9 Ag '60.
(MIRA 13:8)

1. Nachal'nik gruppy sektora tekhnologii i organizatsii
sel'skogo stroitel'stva Akademii stroitel'stva i arkhitektury
USSR (for Uslontsev).
2. Nachal'nik upravleniya stroitel'-
stva Krymskogo oblsel'khozupravleniya (for Yurovskiy).
3. Glavnyy inzhener Simferopol'skogo meshkolkhozstroya (for
Zadorin).

(Crimea--Farm buildings)

USLONTSEV, B.; KORA, G. [Koba, H.]

Arched livestock buildings are being built by production-line methods.
Sil'. bud. 10 no.11:7-10.N '60. (MIRA 13:11)

1. Rukovoditel' gruppy sektora tekhnologii i organizatsii stroitel'stva
Akademii stroitel'stva i arkhitektury USSR (for Uslontsev). 2. Ruko-
voditel' soveta Yavorovskoy mezhkolkhoznoy stroitel'noy organizatsii
L'vovskoy oblasti (for Koba).
(Lvov Province--Farm buildings)
(Collective farms--Interfarm cooperation)

USLONTSEV, B.

Production-line construction of buildings at accelerated speed
and lowered cost. Sil'.bud. 12 no.7:7-11 J1 '62.

(MIRA 15:8)

1. Ispolnyayushchiy obyazannosti rukovoditelya sektora tekhnologii
i organizatsii sel'skogo stroitel'stva Akademii stroitel'stva i
arkhitektury UkrSSR.

(Ukraine--Construction industry)

IVANTSEVICH, Mikhail Nifolayovich; GORVYI, Georgiy Yakovlevich; POLISHKOVA, Olga Adol'fovna; YELISEYEVA, Galina Dmitriyevna, Principal participants: GAVRILOVA, E.F., inzh.-khimik; KAZANTSEVA, A.P., inzh.-khimik; LOGVINA, L.A., inzh.-khimik; USLONTSEVA, L.A., inzh.-khimik; GUDIMENKO, L.F., inzh.; NAZAREVICH, Ye.S., inzh.; SHKVARUK, R.N., inzh.; OILOVA, L.A., inzh.; BASHMAKOVA, I.G., inzh.-geolog; BUREZER, Ye.S., otv. red.; MEL'NIK, A.F., red.

[Geochemistry and analytic chemistry of rare-earth elements. Pt.1. Accessory rare-earth minerals and elements of the cerium subgroup in the Ukrainian Crystalline Shield] Geokhimiya i analiticheskaya khimiya radkozemel'nykh elementov. Kiev, Naukova dumka. Pt.1. Aktsessornye radkozemel'nye mineraly i elementy tserievoi podgruppy ukrainskogo kristallicheskogo shchita. 1964. 164 p. (Akademiya nauk URSR. Instytut geolohicheskikh nauk. Trudy. Seriya paleogeografiya, mineralogiya i geokhimiya, no.1).

1. Chlen-korrespondent Akademiya (for marks).

USMAN, V.B. (Moskva)

Electrocardiographic changes in angioneurotic edema. Klin.med.
no.1:142-144 '62. (MIRA 15:1)

1. Iz terapevticheskogo otdeleniya (nauchnyy rukovoditel' -
kand.med.nauk N.TS. ~~Bagon~~) Moskovskoy gorodskoy bol'nitsy No.58
(glavnyy vrach - dotsent Ye.Ya. Khesin).
(ELECTROCARDIOGRAPHY) (EDEMA)

USMAN, V.B.

Eosinophilic type leukemoid reaction in a rheumatic female patient following treatment with fonurit. Vop.revm. 2 no.3: 82-84 J1-S '62. (MIRA 16:2)

1. Iz terapevticheskogo otdeleniya (nauchnyy rukovoditel' - kand. med.nauk M.TS. Bagon) Moskovskoy gorodskoy bol'nitsy No.58 (glavnyy vrach - dotsent Ye.Ya. Khesin).
(RHEUMATIC HEART DISEASE) (EOSINOPHILES)
(THIADIAZOLESULFONAMIDE)

MARKMAN, A.L., doktor khim.nauk; CHEBOTAREVA, A.P.; USHAMBEOVA, U.

Increasing the oil content of cottonseeds. Masl.-zhir.proz.
26 no.2:11-13 P '60. (MIRA 13:5)

1. Sredneaziatskiy politekhnicheskiy institut.
(Cottonseed oil)

MARKMAN, A.L., doktor khim.nauk; KATS, B.A., kand.tekhn.nauk; CHEBOTAREVA, A.P.;
DUBROVINA, M.N.; USMANBEKOVA, U.

Raising the oil content of cottonseeds. Report No.2. Masl.-zhir.
prom. 27 no.5:18-20 My '61. (MIRA 14:5)

1. Akademiya nauk UzSSR (for Markman). 2. Sredneaziatskiy filial
Vsesoyuznogo nauchno-issledovatel'skogo instituta zhirov (for Kats,
Chebotareva, Dubrovina, Usmanbekova).
(Cottonseed)

USMANKHODZHAYEV, A.; ZAKSTELSKAYA, L.Ya.

Stability of reovirus haemagglutinins. Acta virol (Praha)
[Engl] 8 no.1:84-87 Ja'64.

1. Ivanovsky Institute of Virology, U.S.S.R. Academy of
Medical Sciences, Moscow.

*

GURVICH, E.B.; MILUSHIN, V.N.; SHATKIN, A.A.; USMAKHODZHAYEV, A.;
ZAKSTEL'SKAYA, L. Ya.

Aid to virologist. Vop. virus. 10 no. 6:734-743 K-D '65
(MIRA 19:1)

1. Moskovskiy nauchno-issledovatel'skiy institut virusnykh preparatov (for Gurchich, Milushin). Submitted August 28, 1964.
2. Institut virusologii imeni D.I. Ivanovskogo AMN SSSR, Moskva (for Shatkin). Submitted November 29, 1964.
3. Institut virusologii imeni D.I. Ivanovskogo AMN SSSR, Moskva (for Usmakhodzhayev, Zakstel'skaya). Submitted January 13, 1964.

USMANKHODZHAYEV, Kh. Kh.

Dissertation: "Some Questions on the Kinematics and Dynamics for Changing the Bobbins of Automatic Looms." Cand Tech Sci, Inst of Machine Science, Acad Sci USSR, 16 Jun 54.
(Vechernyaya Moskva, Moscow, 7 June 54)

SO: SUM 318, 23 Dec 1954

USMANKHODZHAYEV, Kh.Kh., kandidat tekhnicheskikh nauk.

Safety factor for the automatic weft-replenisher on a ChGSP loom.
Tekst.prom. 15 no.12 no.12:38-39 D '55. (MLRA 9:3)
(Looms)

USMANKHODZHAYEV, Kh.Kh., kand.tekhn.nauk

Differential equation for the movement of battening devices
taking their weight into consideration. Sbor. nauch.-issl. rab.
TTI no.3:68-74 '56. (MIRA 11:9)
(Mechanical movements) (Looms)

USMANKHODZHAYEV, Kh.Kh., dotsent

Using the equation of dynamics of the variable mass for determining
the force of inertia of the loom batten. Sbor.nauch.-issl.rab.TTI
no.12:163-164 '61. (MIRA 15:11)

(Looms—Testing)

USMANKHODZHAYEV, Kh.Kh.; KUZIBAYEV, G.S.

Motion equation for the driving link of a crank mechanism taking into consideration the friction in kinematic pairs. Izv. AN Uz. SSR. Ser. tekhn. nauk 9 no.3:38-46 '65. (MIRA 18:8)

1. Institut mekhaniki i Vychislitel'nyy tsentr AN UzSSR.

USMANKHODZHAYEV, Kh.Kh.

A universal apparatus for tracing and analyzing the roulettes
of points of the satellite of epicyclic mechanisms. Dokl. AN
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1. Institut mekhaniki AN UzSSR i Vychislitel'nyy tsentr AN
UzSSR.

USMANKHODZHAYEV, Kh.Kh.

Differential equation describing the motion of a class II plane mechanism with Assur's group of the 2d modification. Dokl. AN SSR 21 no. 11:13-16 '64. (MIRA 18:12)

1. Institut mekhaniki AN UzSSR i Vychislitel'nyy tsentr AN UzSSR.
Submitted June 30, 1964.

KHAMUDKHANOV, M.Z.; USMANKHODZHAYEV, N.

Frequency method for the speed control of a capacitor asynchronous motor. Izv. AN Uz SSR Ser. tekhn. nauk no. 5:3-18 '60. (MIRA 14:9)

1. Institut energetiki i avtomatiki AN UzSSR.
(Electric motors, Induction)

KHAMUDKHANOV, M.Z., doktor tekhn.nauk; USHANKHODZHAYEV, N.M., inzh.

Frequency regulation of the speed of two-phase asynchronous motors.
Vest. elektroprom. 33 no.8:12-17 Ag '62. (MIRA 15:7)
(Electric motors, Induction)

KHAMUDKHANOV, M.Z.; AKHMEDOV, I.; USMANKHODZHAYEV, N.M.

Developing the principle of changes in the magnetization current of a saturation choke coil controlling the d.c. drive with independent excitation depending on the load type. Izv.AN Uz.SSR.Ser.tekh. (MIRA 18:10)
nauk 9 no.5:9-16 '65.

1. Uzbekskiy nauchno-issledovatel'skiy institut energetiki i avtomatiki.

KHAMUDKHANOV, M.Z.; USMANKHODZHAYEV, N.M.

Braking modes of single-phase asynchronous condenser motors.
Izv. AN Uz.SSR.Sar.tekh.nauk 8 no.4:13-20 '64. (MIRA 18:4)

1. Institut energetiki i avtomatiki AN UzSSR.

USSR/Cultivated Plants - Commercial. Oil-Bearing. Sugar-Bearing.

M-5

Abs Jour : Ref Zhur - Biol., No 20, 1958, 91751

Author : Usmanov, A.

Inst : -

Title : Ways of Increasing the Cotton Crops on the Soils of Golodnaya Steppe.

Orig Pub : Khoplkovodstvo, 1958, 4, 46-47.

Abstract. : No abstract.

Card 1/1

YENGULATOV, I.A., kand. tekhn. nauk (Tashkent); YEREMENKO, G.V., inzh.
(Tashkent); USMANOV, A., inzh. (Tashkent)

Planned or "critical" depth of ground waters. Gidr. i mel. 16
no.7:21-30 J1 '64. (MIRA 17:11)

USMANOV, A.A.

Changes in cardiac activity during surgery under spinal anesthesia.
(MIRA 16:2)
Zdrav.Kazakh. 22 no.11:16-21 '62.

1. Iz kafedry gosspital'noy khirurgii (zav. - prof. M.I. Bryakin)
Kazakhskogo meditsinskogo instituta.
(SPINAL ANESTHESIA) (ELECTROCARDIOGRAPHY)

USMANOV, A.G.

Principles for calculating the zone of the homogeneous quasistatic reaction in a turbulent flow of constant density. Trudy KKHTI no.13:
90-100 '48. (MIRA 12:12)

1. Kazanskiy khimiko-tekhnologicheskii institut im. S.M. Kirova,
kafedra teplotekhniki.
(Turbulence)

USMANOV, A. G.

Usmanov, A. G. "Principles of calculating zones of a homogeneous quasi-static reaction in a turbulent stream of constant density," Trudy Kazansk. khim.-tekhrol. in-ta im, Kirova, Issue 13, 1948, p. 90-100 - Bibliog: 10 items

SO: U-3264, 10 April 1953, (Letopis 'Zhurnal 'nykh Statey, no. 3, 1949)

D'YAKONOV, G.K.; USMANOV, A.G.

On the similitude of physicochemical processes. Trudy IKHTI
no.16:37-42 '51 [Publ. '52]. (MIRA 12:12)
(Chemical reaction--Conditions and laws) (Dimensional analysis)

D'YAKONOV, G.K. [documented]; ZEMTOV, A.P.; ELIYSEV, V.P.; IOSTOVSEVA, L.;
OSTROY, G.A.; USKOLOV, A.G.

Investigation of the temperature field of ZrO₂ for the synthesis of
butadiene. Trudy KHEI no. 13-121 '63 [vol. 16]. (1-12, 13:11)
(Butadiene) (Temperature — measurement) (Furnaces)

USMAN CV, A. G.

9(0)

NAME I BOOK REFLECTIONS

9(0)

NAME. Institute-technological Institute named S.M. Kirov
Treb, 779. 22. Minskshchye unit (Transactions of the Chemical and Technological
Institute named S.M. Kirov, Issue No. 22, Chemical Sciences) Krasn, 1956.
175 p. Series ally issued. 300 copies printed.

Editorial Board: E.B. Shchukin (Resp. Ed.) Professor, A.A. Trufanov, (Resp. Ed.)
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PURPOSE: This book is intended for industrial chemists, technologists, scientists,
teachers, and research students in applied chemistry.

CONTENTS: The collection contains reports by faculty members of the sponsoring in-
stitute and also commemorates the 75th year of birth and first anniversary of
the death of Professor Aleksey Khlopovitch Vasil'ev, Doctor of Chemical Sciences
and head of the Faculty. A review of Vasil'ev's scientific activities is given
along with a chronological bibliography of his publications and that of members
of the Institute under his leadership. The collection contains reports of scientific
work, with abstracts of the papers presented at the symposium, chemical
analyses, and investigations of the prospective application of physicochemical
methods in industrial processes, e.g., etching with ultrasound, enhancing
the production of building materials with additives, etc. References are given
at the end of each article.

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Card 5/6

PART I BOOK EXPLANATION

SOV/L590

Akademiyu nauk SSSR. Energeticheskii Institut

Issledovaniya i inzhiniring teploobmena (Convection and Radiation Heat Exchange)
 Moscow, Izdatel'stvo AN SSSR, 1960. 254 p. Errata slip inserted. 3,500 copies
 printed.

Ed.: M.A. Mikheyev, Academician; Ed. of Publishing House: G.B. Gorbukh; Tech.
 Ed.: V.V. Bragulya.

PURPOSE: The book is intended for scientists and engineers working in various
 branches of science and industry concerned with thermodynamics and heat trans-
 fer problems.

CONTENT: The book consists of 19 original articles on various problems in thermo-
 dynamics. The following subjects are discussed: mechanism of heat transfer
 processes, intensification of heat exchange, determination of thermophysical
 properties of operating media, heat transfer in supercritical flow of fluids,
 combustion chambers and nuclear reactors. Theory and experimental data on
 are described. Each article describes the conditions of the experiment and
 tables of the experimental data obtained are given. The data may be used for
 calculations of heat transfer and heat exchangers, always taking account of

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AVAILABLE: Library of Congress

SOV/58-59-5-10464

Translation from: Referativnyy Zhurnal Fizika, 1959, Nr 5, p 92 (USSR)

AUTHORS: Usmanov, A.G., Berezhnoy, A.N.

TITLE: Generalization of Experimental Data on the Diffusion¹ of Vapors

PERIODICAL: Tr. Kazansk. khim.-tekhnol. in-ta, 1958, Nr 22, pp 115 - 122

ABSTRACT: The dependence of mean relative diffusion flows in a gaseous medium have been obtained (A.G. Usmanov, Tr. KKhTI, 1958, Nr 22). Using the similarity method on these data, the authors arrive at a generalized dependence of the diffusion coefficient on the entropy of the system at various temperatures in the case of an isothermal process. With the aid of these generalized dependences, diffusion coefficients are determined for a series of binary and single-component mixtures in a wide range of temperatures. Deviations from the experimental data do not exceed 2% for the majority of the diffusion coefficients. It is noted that similar generalized dependences yielded a satisfactory

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SOV/58-59-5-10464

Generalization of Experimental Data on the Diffusion of Vapors

result on generalizing experimental data pertaining to viscosity and thermal conductivity
in the gaseous phase. (Usmanov, A.G., Bol'shov, V.R., Tr. KKhTI, 1958, Nr 22). 24

L.P. Kholpanov



Card 2/2

USMANOV, A. G.

57-2-20/32

AUTHORS: Grigor'yev, L. N. , Usmanov, A. G.

TITLE: Emission of Heat in the Boiling of Binary Mixtures (Teploot-dacha pri kipenii binarnykh smesey)

PERIODICAL: Zhurnal Tekhnicheskoy Fiziki, 1958, Vol. 26, Nr 2, pp. 325-332, (USSR)

ABSTRACT: The dependance of the coefficients of dissipation of heat on the composition of the mixture is investigated here and an attempt is made to determine the mechanism of the process in the boiling of the mixtures. At first the influence upon the mechanism of the process of steam-generation in the boiling of binary mixtures is investigated and it is shown that the data existing in publications are very contradictory. For this reason the investigation of the process of heat emission was performed during the boiling of some binary mixtures. The tests were made on a large scale at natural convection under atmospheric pressure. Two apparatus were erected, a large one with windows in which a visual observation and the photographing of the boiling process of the mixture of ethyl alcohol and water

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57-2-20/32

Emission of Heat in the Boiling of Binary Mixtures

took place, and a small apparatus in which the fundamental tests on the emission of heat during the boiling of the mixtures were made. The two apparatus did not differ in their mode of operation. Based on the tests the following was found:

- 1.) The mechanism of the boiling process of binary mixtures considerably differs from that of one-substance liquids.
- 2.) The composition of the boiling mixture influences the process of heat emission during boiling. This influence takes effect in the dependence of the value of the radius of curvature at the smallest nodule of unevenness, which acts as center of steam-generation, on the concentration of the boiling mixture.
- 3.) An equation (7) is derived here for the determination of the radius of curvature of the smallest nodule of unevenness acting as center of steam generation in the boiling of binary mixtures of liquids. This equation was confirmed in a qualitative respect.
- 4.) The coefficients of heat emission in the boiling of binary mixtures are considerably smaller than those of pure components of which the mixture consist. At a certain concentration of the mixture a well marked minimum of the function $\alpha = f(x_1)$ is observed. x_1 -Mol-concentration according to the component with lower boil-

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7-2-20/3-

Emission of Heat in the Boiling of Binary Mixtures

ing point index "1" refers to the liquid. The authors were given advice by G. N. Krushilin, Corresponding Member of the AS USSR. There are 3 figures, and 3 references, 2 of which are Slavic.

SUBMITTED: December 13, 1956

AVAILABLE: Library of Congress

1. Binary compounds-Heat emission

Card 3/3

USMANOV, A. G., Doc Tech Sci (diss) -- "A generalization of experimental data on the processes of transfer in gases". Moscow, 1959. 24 pp (Acad Sci USSR, Power Engineering Inst im G. M. Krzhizhanovskiy), 150 copies (KL, No 22, 1959, 113)

USMANOV, Aytugan Garifovich (Kazan' Chemical & Technological Institute
im. Kirova), for Doctor of Technical Sciences on the basis of the
dissertation defended 11 June 1959 in the Council of ~~the~~ *the Power Engineering*
~~the~~ im. Krzhizhanovskiy Acad. Sci. USSR, entitled: "Generalization
of experimental data *on processes* of transfer ~~data~~ in gases." (BMVISO USSR, 2-61, 17)

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USMANOV A. G.

24(8)

PHASE I BOOK EXPLOITATION

SOV/1826

Akademiya nauk SSSR. Energeticheskiy Institut

Teplotopredacha i teplovoye modelirovaniye (Heat Transfer and Modeling of Heat Processes) Moscow, Izd-vo AN SSSR, 1959. 419 p. Krata aliip inserted. 3,500 copies printed.

Reep. Ed.: M. A. Mikhayev, Academician; Ed. of Publishing House: D. A. Ivanova; Tech. Ed.: G. M. Shevchenko.

PURPOSE: The book is intended for scientists concerned with heat transfer, heat emission, and hydraulics of liquid metals, etc.

COVERAGE: This collection is dedicated to the memory of Academician M. V. Kirpichev, who in the twenties initiated a systematic investigation of heat transfer processes and the efficiency of heat exchangers. Later he led the development of research work in this field. Two special collections devoted to works of Kirpichev's school have been published, one in 1938, Materialy sovetskaniya po modelirovaniyu (Materials of the Conference on Modeling) and in 1951, Teoriya podobiya i modelirovaniya (Theory of Similitude and Modeling). The present collection prepared in 1956 represents further development of the work of this school. This theory is fundamental for the analysis of many heat problems in the field of electrical and radio engineering. Of great importance are the first systematic investigations of heat transfer and the hydraulics of liquid metals which as a new kind of heat carrier may be used in the various branches of modern engineering. As a result of special investigations of some cases of convective heat transfer, a dependence of the process on the kind of liquid, temperature, pressure, direction of the heat flow, and other factors, was discovered and established. On the basis of a wide generalization of experimental data, new dependable recommendations for heat analysis of engineering equipment are developed. The liquid metal heat exchangers and the condensation of vapors in boiling liquids and the theory of similitude, the nature of which, according to M. V. Kirpichev, is that of "experimentation." Work on the theory of a regular regime applied to a system of bodies with an internal source of heat is of interest for the future.

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USMANOV, A. G. On One Supplementary Condition of Similitude of 298
Heat Transfer Processes
This supplementary condition of similarity of molecular processes was established consisting of the requirement of identity of density fields of the probability distribution. Similarity equations describing the kinetics of molecular processes of transfer were established. Experimental data on viscosity and heat conductivity of gases are generalized. There are 13 references: 10 Soviet and 3 English.

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Heat Transfer (Cont.)

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USMANOV, A. G. and V. P. Bol'shov. Generalization of Experimental 313
Data on the Viscosity and Heat-Conductivity of Gases
This generalization depends on the knowledge of the coefficients of heat conductivity λ and of the dynamic viscosity η . The average values of these coefficients are determined by graphs $\lambda = \lambda(t)$ and $\eta = \eta(t)$ drawn according to experimental data for various pressures. The method described was verified on the example of a wide range of temperatures and pressures of steam. The generalized relations may be used to increase knowledge of heat conductivity and viscosity coefficients of steam, without further experimental data. D. A. Tsimmer and M. B. Vargafik are mentioned in connection to experimental data and the equation of η . There are 5 references: 4 Soviet and 1 English.

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AUTHORS:

TITLE:

PERIODICAL:

ABSTRACT:

Grigor'yev, L. M., Usmanov, A. G.

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S/170/59/002/11/019/024
B014/B014

Heat Exchange in Boiling Azeotropic Mixtures

Inzhenerno-fizicheskiy zhurnal, 1959, Vol 2, Nr 11, pp 114-118 (USSR)
Formula (1) which represents the dependence of the radius of curvature Q_0 of the smallest elevations acting as evaporation centers upon the composition of the boiling mixture, was derived by the authors in an earlier paper (Ref 1) for the heat exchange in boiling binary, azeotropic mixtures. In the present paper, the authors studied the effect of the complex B in equation (1), which is represented in equation (3). The effect of the quantity B on the heat-exchange coefficient depends on the respective sign, and the signs of the factors of B represented in (4) are studied separately. The sign of the left-hand expression of (4) may be negative or positive according to the composition of the mixture. According to Storonkin, the sign of the right-hand expression of (4) is obtained from formula (5). This sign is shown to depend on the difference in evaporation heat of the two components of the mixture. For the major part of the non-azeotropic mixtures studied by the authors the last-mentioned expression has a negative sign (Table 1). Figure 1 further indicates that the sign of the differential expression denoted by B has a positive sign for seven of the investigated

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Heat Exchange in Boiling Azeotropic Mixtures

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mixtures. Therefore, complex B has a negative sign, and q_0 must have a maximum and, consequently, the heat-exchange coefficient a minimum which depends on the composition of the boiling mixture. These theoretical considerations were confirmed by experimental results (Ref 1). Results of experiments performed on three azeotropic mixtures are graphically shown in figures 2-4. The right-hand expression of (4) had a positive sign for two of the three mixtures. The left-hand expression of (4) had a maximum or minimum for all of the three mixtures, which means that it had reversed signs before and after attaining the bend point. It is thus possible to explain the fact that the heat-exchange coefficient of azeotropic mixtures has a maximum and a minimum (Figs 2-4). There are 4 figures, 2 tables, and 4 Soviet references.

ASSOCIATION:

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ard 2/2

GRIGOR'YEV, L.N.; USMANOV, A.G.

Conditions of similarity for heat transfer during boiling of
binary mixtures. Trudy KKHTI no.26:32-41 '59. (MIRA 15:5)
(Heat—Transmission) (Ebullition)